

SOUTHLAND CONSERVATION BOARD

TE ROOPU ATAWHAI O MURIHIKU

SUBMISSION ON A NOTIFIED APPLICATION FOR RESOURCE CONSENT

To: Environment Southland

Name of Submitter: Southland Conservation Board.

Note:

A conservation board provides for interaction between the public and the Department of Conservation at the regional/district level. Conservation boards are independent bodies, established by the Conservation Act 1987.

Each board represents the community of interest in the work of the Department and conservation in general within that board's area of jurisdiction

A conservation board's interests are set out in the Conservation Act 1987. Section 6N 2(a) empowers a board to

"...advocate its interests at any public forum or in any statutory planning process".

This is a submission on an application from:

Lake Waituna Control Association

For a Resource Consent to:

Authorise proposed activities:

- Periodic opening of Lake Waituna to the sea by excavation of a channel through the gravel barrier separating Lake Waituna from Toetoes Bay. The works include disturbance of the foreshore and placement of excavated material adjacent to the excavation.
- Disturbance of the lakebed associated with the excavation of the channel
- Diversion of water from Lake Waituna and associated wetlands
- Discharge of water from Lake Waituna into the sea

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Purpose: The openings are primarily to reduce lake levels in order to facilitate drainage outfall on farmland within the Waituna catchment, and to protect the ecological health of Lake Waituna.

Location: The openings may occur in the gravel barrier between Lake Waituna and Toetoes Bay at the following locations:

- Walker's Bay between NZTM 1262291E, 4831330N and 1261460E, 4831000N;
- Hansen's Bay between NZTM 1265305E, 4832570N and 1265405E, 4832605N;
- on the coast opposite Waghorns Bridge between NZTM 1267033E, 4833144N and 1267421E, 4833249N; and
- at the eastern end of the lagoon between NZTM 1267791E, 4833340N and 1268092E, 4833413N.

The specific parts of the application that our submission relates to are:

1. The application as a whole
2. The proposal to open the lagoon under regime that involves trigger levels that differ from those recommended by the Waituna Science Advisory Group in 2017 (report attached to the application as Appendix 5)
3. The apparent lack of consideration throughout the application and supporting documents of the effects of sea level rise.

Our submission is:

1. That the implications of refusing the application and consequently of the 'do nothing' option – not allowing the opening of the lagoon at all – need to be considered in assessing whether or not to grant the application.
2. Any approval should be in accord with the recommendations of the Waituna Science Advisory Group as stated in its 2017 report
3. Detailed consideration of the implications of sea level rise long-term on the management of Waituna Lagoon need to be considered.

The Board's reasoning is:

1. A conservative approach needs to be taken in managing this place internationally recognized for its ecological significance.

The Murihiku Conservation Management Strategy (pg 106) describes the Waituna wetland as follows:

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*This Place includes one of the largest wetland areas in New Zealand, the Awarua wetland complex, which contains extensive peat bogs and estuaries, some of which are within the Waituna–Awarua Plains priority ecosystem unit. Approximately 20 000 hectares of this complex is the Awarua Wetland of International Importance (see Appendix 15), covering all or part of: the Waituna Wetlands Scientific Reserve; Waituna, Waghorn and Waghorn Waituna scenic reserves; Seaward Moss, Awarua Plains, Awarua Bay, Tiwai Spit and Toetoes conservation areas; and Toetoes Harbour, Awarua Bay and New River Estuary. In addition to peat bog, the Awarua wetland complex contains a diverse mosaic of indigenous wetland vegetation, including a number of species that are usually found in alpine habitats, such as the cushion-forming *Donatia novae-zelandiae*, comb sedge (*Oreobolus pectinatus*), sky lily (*Herpolirion novae-zelandiae*), four sundews (*Drosera* spp.), and the Naturally Uncommon gentian *Gentianella lineata*. There are also pockets of indigenous tussockland, rushland and harakeke/flaxland, as well as remnant forest woven into the wetland vegetation, which is dominated by mānuka shrubland and wire rushland. There are a number of pressures on this internationally significant wetland complex, largely as a result of human modification and intensification of agriculture within the catchment. This is of particular concern around the Waituna Lagoon, where sediment and nutrient inputs are increasing algal growth and impacting on the aquatic indigenous plant communities, as well as degrading water quality. Both Ngāi Tahu and the community highly value this Place, with a number of community groups and agencies, such as the Waituna Landcare Group, the Waituna Partners Group²⁹ and Community Investment in Water³⁰, working hard to improve the water quality within the wetland complex. Fires, particularly as they can burn for long periods in this environment, can lead to extensive loss of ecological values and opening up areas for new invasions of pest plants. Consequently, the Department works closely with the Southern Rural Fire Authority (of which the Department is a member), focusing on prevention where possible. Pest plants and animals are another threat to the indigenous ecosystems. The Waituna Lagoon is a highly valued component of the Awarua wetland complex and is home to a number of threatened and at-risk indigenous species, such as the Nationally Vulnerable Pygmy clubrush, the Declining tufted hair grass and swamp nettle, and the Naturally Uncommon native musk, as well as important beds of the aquatic plants *Ruppia megacarpa* and *R. polycarpa*. The name 'Waituna' means 'water of eels', which highlights the value of the lagoon both as a mahinga kai/moana gathering site and as indigenous fish habitat. The streams and creeks flowing into Bluff Harbour, Awarua Bay and Waituna Lagoon contain indigenous marine, estuarine and freshwater fish species, which include populations of the Declining taiwharu/giant kōkopu, redfin bully, īnanga/īnaka and tuna/longfin eel, plus banded kōkopu, tuna/shortfin eel, common bully and*

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kōkopu/hawai/giant bully (Gobiomorphus gobioides), and estuarine species such as aua/yellow-eyed mullet.

2. A conservative approach to conservation management implies minimum 'top down' intervention.

The dangers of 'top down' intervention are well summarized in Command and Control and the Pathology of Natural Resource Management (C.S. Holling, Gary K. Meffe 1996)

As the human population grows and natural resources decline, there is pressure to apply increasing levels of top-down, command-and-control management to natural resources. This is manifested in attempts to control ecosystems and in socioeconomic institutions that respond to erratic or surprising ecosystem behaviour with more control. Command and control, however, usually results in unforeseen consequences for both natural ecosystems and human welfare in the form of collapsing resources, social and economic strife, and losses of biological diversity. We describe the "pathology of natural resource management," defined as a loss of system resilience when the range of natural variation in the system is reduced encapsulates the unsustainable environmental, social, and economic outcomes of command-and-control resource management. If natural levels of variation in system behaviour are reduced through command-and-control, then the system becomes less resilient to external perturbations, resulting in crises and surprises.

3. A conservative approach to management of the Waituna wetland area would include consideration of the 'do nothing' option (i.e. refuse the consent, allow the level of the lagoon to fluctuate without control.) The Southland Conservation Board considers that it does not have sufficient information to advocate this strategy, and it is very aware of the possible social, cultural and economic impacts and consequences. However, in the interests of the long-term future of this internationally recognized wetland, the implications of not allowing a managed opening in any circumstance need to be considered and evaluated.
4. The effects of sea level rise need to be considered. Projections are changing regularly, and indications are that early projections were overly optimistic as to the severity of possible rises.

The following, from TIDAL EXCEEDANCES, STORM TIDES AND THE EFFECT OF SEA-LEVEL RISE (Dr Robert Bell, NIWA, 2010, indicates the scale of the issue.

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Climate change introduces a sea-level trend and acceleration that also needs to be accounted for any long-term assessments of coastal hazard risk and for setting minimum ground or building floor levels. Sea-level rise by 2100 is increasingly unlikely to be much less than 0.5 m and could reach 1 m or more.

Spring tide and storm surge effects need to be added to this, together with any anticipated effect from plate tectonics (may the area go up or down in the event of a significant earthquake?)

The Board seeks the following decision from the consent authority:

1. The Board is not advocating at this point the refusal of the application and the adoption of a 'do nothing' approach to opening the lagoon. However, the Board recommends that evaluation of this option be undertaken prior to the hearing and considered at the hearing
2. The Board accepts that there is a lack of hard data supporting either a 2.0 m trigger or a 2.5 m trigger but submits that the principle of conservative management should be applied to management of the Waituna Lagoon and that principle would favour the higher trigger level in accordance with the recommendations of the Waituna Science Advisory Group
3. The Board submits that further consideration of the effects of sea level rise, short and long term, and any tectonic effect, need to be included in decision-making.

The Board **DOES** wish to be heard in support of its submission.

Yours sincerely



Shona Sangster
Board Chair

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